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ABSTRACT

Establishing partnerships between institutions of higher education (IHEs) and local education agencies (LEAs) is a common recommendation in the many state and national reports advocating the reform of education. The rationale for such partnerships is that collaboration can assist LEAs in their efforts for school improvement, while IHEs can more actively participate in addressing problems confronting public education. This paper describes such a partnership among Texas Technological University, Greenwood school district, the Greenwood parent/teacher organization, the Southwest Educational Development Laboratory, an organization of county governments, and a local chamber of commerce. The goal of the partnership is to develop and test a prototype model which can be used or modified by rural and small schools in their efforts to produce improved student learning, provide for teacher and administrator renewal, and consequently develop more effective schools. The description of the model includes: (1) general assumptions; (2) a definition of "school improvement"; (3) identification of five areas on which school improvement efforts should focus; (4) the problem of student learning; (5) characteristics of effective collaboration between LEAs and IHEs; and (6) and steps relating to the school improvement process. The paper specifies each of these bases of the model and gives examples from a program to improve the teaching of thinking skills within this framework. This report contains 18 references. (Author/DHP)

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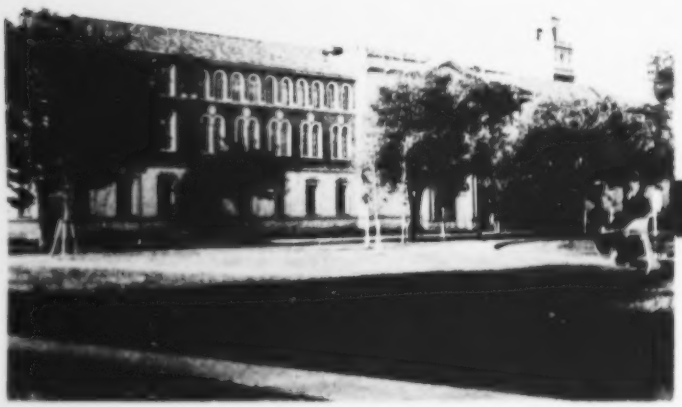

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A Partnership Approach in Developing A Model for Improved Student Learning and Teacher Renewal in Rural/Small Schools

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A PARTNERSHIP APPROACH IN DEVELOPING A MODEL FOR IMPROVED STUDENT LEARNING AND TEACHER RENEWAL IN RURAL/SMALL SCHOOLS

Abstract

Establishing partnerships between institutions of higher education (IHEs) and local education agencies (LEAs) is a recommendation now often found in the many state/national reports advocating educational reform. The rationale for such partnerships is that such collaboration can assist LEAs in their efforts for school improvement and for IHEs to more actively participate in addressing certain problems confronting public education as well as acquiring another means for strengthening their teacher preparation programs. Based on this rationale and some principles of educational networking, a partnership was formed with Texas Tech University (Lubbock, Texas) and Greenwood ISD (Midland County, Texas), the Greenwood Parent-Teacher Club, Education Service Center--Region 18 (Midland), Southwest Educational Development Laboratory (Austin), Permian Basin of County Governments, West Texas Chamber of Commerce, and the Midland Chamber of Commerce.

The overall goal of this partnership is to develop and test a prototype model which can be used or modified by rural/small schools in their efforts for improved student learning, teacher/administrator renewal, and consequently more effective schools.

Introduction

The extent of public concern for the quality of education, including that offered in rural and small schools, is now evidenced by a stream of well publicized national reports. These reports focus on various deficiencies in public education and to the relationship between the quality of schooling and America's future. These national reports also emphasize that public education has not kept pace with changes in society; they charge that schools no longer satisfy the requirements of the work place or respond sufficiently to conditions arising from America's leadership in the world. While these reports differ in particular details, they all point down the same road: school improvement. Recognizing this concern, many states, such as Texas, have recently enacted legislation (i.e., the Educational Opportunity Act, Chapter 75 of the Texas Administrative Code, and the Long-Range Plan for Texas Public Education) to encourage, mandate and support efforts toward school improvement. Based on past experience in such endeavors, many professional educators agree that effective school improvement with lasting effects is a complex and difficult process posing many questions such as: What is exactly meant by school improvement? What are some indicators of school improvement/success? And what are some effective ways in working toward school improvement or educational excellence?

The road to effective school improvement can go in several directions according to Lieberman & Rosenholtz (1987) and will have many barriers to overcome as well as bridges to build. In fact, one media (Kerr, 1987) has already claimed that some recent attempts to reform public schooling are a failure: "The reforms, aimed at an already heavily bureaucratic and inflexible system, propose to heal the patient by administering more of what made him sick." In short, the successful reform of public schools, a complex and hierarchically organized institution, will require time, effort, planning, and unique types of collaboration by many people at the various levels of the education community. Also, it will be necessary for educators, legislators, community leaders, parents, and others to recognize three crucial factors that have inhibited school improvement efforts in the past. These are (1) promising more than can be delivered, (2) failing to deal effectively with the reality of limited resources, and (3) failing to recognize and initiate opportunities for collaboration and resource sharing (Ward & Pascarelli, 1987).

The practice of collaboration and resource sharing through partnerships or networking of agencies and individuals is a promising practice (Ishler, 1986). Collaborative networks are viable and practical vehicles for developing and maintaining skilled professionals who are required by the schools and for developing school improvement efforts in a cost-effective manner. Also, research data are now available to assist in enactment of

collaborative efforts focused upon school improvement (Ward & Pascarelli, 1987).

Recognizing some of the forementioned concerns, problems, criticisms, barriers, bridges to be built, potential of collaborative partnerships, and the need for effective school improvement practices in rural/small schools, several educators from a major research university and a rural/small school began discussing problems and opportunities. The purpose of this paper is to describe some of their collaborative efforts which include a network and model designed for improved student learning and teacher/administrator renewal in rural/small schools.

Background of the TTU-GISD Partnership

Institutions of higher education are also the subject of much criticism, particularly their teacher preparation programs. This is especially true in Texas where in the last session (1987) of the Texas Legislature a controversial bill (SB994) was passed mandating the restructuring of all teacher preparation programs at the university level. This legislation will have considerable impact on the teacher preparation programs at Texas Tech University. There is a concern that this legislation may in fact weaken rather than strengthen teacher education at Texas Tech University.

At the national level, an organization known as the Holmes Group has been established with the goal of improving teacher education at major research universities. The Holmes Group proposes to add more substantive requirements in teacher education including extending the time to complete the program, an extensive intern program, and the establishment of professional development schools in cooperation with local school districts. Texas Tech University has been invited to become a member of the Holmes Group and is presently considering joining this organization.

Establishing partnerships between local education agencies (LEAs) and institutions of higher education (IHEs) is not only a recommendation of the Holmes Group but is a recommendation in many reports advocating educational reform. The rationale for these partnerships is that such cooperation can assist LEAs in their efforts to have effective schools and to achieve educational excellence. As concerns IHEs, it is an opportunity to participate in addressing certain types of problems confronting public education as well as acquiring another avenue to strengthen their teacher preparation programs.

Based upon this rationale, the College of Education of Texas Tech University (Lubbock, Texas) requested and was given approval from the Board of Regents to establish a Center for Excellence in

Education. The purpose of this Center is to conduct research on the recent educational reforms mandated by the Texas Legislature. The Center is divided into units, each focusing on a specific area of research, school reform/change, or development. One of the areas of focus of the Center is the operation and problems of rural/small schools in West Texas.

A rural/small school district with certain characteristics was sought as a partner with the Center in this endeavor. Greenwood ISD appeared to meet certain desired criteria and agreed to serve as a partner. Greenwood is located 125 miles south of the Texas Tech University campus and 16 miles east of Midland, Texas. Greenwood ISD has approximately 1,250 students (K-12) and 75 faculty members.

Goal of Partnership Program

The overall goal of this partnership, or program, is to develop and test a prototype model which can be used or modified by rural/small schools in their efforts for improved student learning, teacher/administrator renewal. This model is described in detail later in this paper.

Expansion of the Partnership

During the initial planning stage for this model, it readily became apparent that collaboration of several types of "partners" was needed. The partnership was expanded and now includes: Texas Tech University, Greenwood ISD, Greenwood Parent-Teachers Club, Education Service Center--Region 18 (Midland), Southwest Educational Development Laboratory (Austin), Permian Basin of County Governments, West Texas Chamber of Commerce, and the Midland Chamber of Commerce.

Communications of the Partnership Program

It also became apparent that an effective/instant communication system was needed for certain members of the partnership. Thus, an electronic communication network was established using existing computer terminals and the "Electric Pages." This electronic mail system connects TTU, Greenwood ISD, Education Service Center--Region 18, and the Southwest Educational Developmental Laboratory. Also, instructional delivery systems using telecommunication, primarily distance learning, will be investigated.

Development of the Model

The model is being developed, through a collaborative effort by various teachers/administrators of the Greenwood ISD and faculty/administrators of Texas Tech University. The general framework for developing the TTU/GISD partnership model program is depicted in Appendix A. The model is based upon the following:

- General assumptions
- A definition of the term "school improvement"
- Identification of five areas where school improvement efforts should focus
- Problem of student learning
- Some characteristics of effective collaboration between LEAs and IHEs
- Steps relating to the school improvement process

A brief explanation/description of these factors is presented in the following paragraphs.

General Assumptions

The model is based upon the following assumptions:

- There is much potential in the use of collaborative networks as an approach for developing new programs, procedures, curricula, and personnel which are necessary for an effective resolution to the school improvement problem.
- Rural/small schools need assistance to develop and implement effective partnership strategies which will act in their capacity/ability to obtain additional resources.
- Adequate research data on effective schools and teachers are now available.
- All students can learn.
- Most students can become better learners, using resources we now have or can readily obtain.
- School reform/change is a process--not an event.
- Effective staff development is directly related to the planning and implementation of the curriculum.

- Status of teachers/administrators in rural/small schools can be enhanced.

Defining School Improvement

Solving persistent problems and increasing the capacity to attack future ones is the underlying base of school improvement (Loucks-Horsley & Hergert, 1985). For the purpose of developing this model, the term school improvement is used quite broadly to include the pursuit of any goal that benefits students and/or teachers and that has as its focus the classroom and school building. Some examples of such goals include:

- Developing and implementing a district wide math curriculum for elementary grades.
- Developing and implementing a program for improving the teaching of thinking skills (K-12).
- Implementing Edmond's "correlates of effective schools" in the secondary school.
- Upgrading the district's science curriculum to include technological advances.
- Increasing equitable treatment and opportunities for all students in a rural/small school district.

Areas of School Improvement

Based upon research on improving schools, Goodlad (1984) suggests that school improvement, either at the district or building level, should focus on five areas: school climate, school planning, staff development, curriculum and instruction, and communication. A short definition/description of these areas is as follows:

School climate. There should be evidence of active community support for the school. A continuing effort should be made to assess and improve working conditions and faculty and staff morale.

School planning. There should be an ongoing task force for school planning. The faculty should be involved in school decision-making.

Staff development. Faculty members should be involved in determining the in-service activities for their school. A campus-based program of professional growth and development for all faculty/staff members should be in operation.

Curriculum and instruction. Student-achievement data should be used to plan both for individuals and for the overall school program. A follow-up program should be in place to gather data from graduates and dropouts to help revise school programs. Programs and activities should be available to serve a wide range of student needs.

Communication. A program of public relations should be in place. There should be evidence of effective ongoing communication within the school, between the school and the home, and between the school and district office.

Problem of Student Learning

One of the problems that was constantly in the foreground in the discussion of the proposed model was that students do not learn enough in school. According to Hart (1985), for all but a few students in the public schools, the learning accomplished, at all levels, tends to be weak, fragmentary, superficial, and temporary--much of it soon forgotten after the student has "passed." Hart also claims that much evidence exists that students do not often emerge from 12 years of schools well prepared for work, training, or higher education. (This concern was addressed as a goal of the proposed program and is described later in this paper.)

Characteristics of Effective Collaboration

Recent studies provide information to assist in enactment of collaborative efforts between IHEs and LEAs focused upon school improvement. Building from this knowledge base, Ward and Pascarelli (1987) identified four characteristics of collaboration that appear to be particularly important as related to the TTU/GISD model. These are (a) parity, (b) problem focus, (c) responsibility, and (d) context-relevance. A brief description of these characteristics is presented in the following paragraphs.

Parity. Collaboration that gives all participants or partners "parity" is what is desired. That is, each partner is recognized to have certain area(s) or types of expertise and there should be opportunities for the collaboration to learn from and react to the expertise of all members of the team. Thus, parity among the members of the partnership is a desirable characteristic.

Problem focused. This characteristic pertains to the fact that it is essential that school improvement efforts focus upon resolution of problems that are school-based and are seen as important and persistent by those who will bear the brunt of resolving them.

Responsibility. Collaborative professional development and school improvement efforts are no different than other professional activities. If the work is to be done, the collaborators must assume responsibility for carrying out the required research, development, training, implementation, and evaluation activities. Some responsibilities involve challenging, growth-enhancing activities. Others are mundane tasks that must be done in order to accomplish the desired improvement.

Context-relevance. The final characteristic of effective collaboration is the context-relevance of the work that is done. More specifically, the collaboration must focus upon improvements in the actual schools and classrooms of the network participants.

Steps Relating to the School Improvement Process

In developing the TTU/GISD model, the seven steps relating to the school improvement process as suggested by Loucks-Horsley and Hergert (1985) were considered. These seven steps are:

1--Establishing the School Improvement Project
2--Assessment and Goal Setting
3--Identifying an Ideal Solution
4--Preparing for Implementation
5--Implementing
6--Review
7--Maintenance and Institutionalization

Some Goals of the Model

The overall goal of the TTU/GISD partnership, or program, is to develop and test a prototype model which can be used or modified by rural/small schools in their efforts for improve student learning, teacher/administrator renewal, and consequently more effective schools.

Some goals/components of the TTU/GISD model will include:

- Develop a framework for improving the teaching of skillful thinking throughout the curriculum.

  Example: This will include TTU specifically designing a graduate level course (workshop format) for the teachers of GISD (K-12), titled "A Framework for Improving the Teaching of Thinking Skills," and will be conducted as an off-campus resident course (3-semester hours) during the 1987 fall semester. The course outline is presented as Appendix B. Based upon the concern and desire

for the improvement of skillful thinking, the GISD was invited by the Southwest Educational Development Laboratory (SEDL) to participate in a rural/small school initiative effort that will focus on staff development to improve the teaching of thinking skills (Invitation presented as Appendix C). In the near future, it is planned that GISD will become a Demonstration School in the area of teaching skillful thinking.

- Design and provide specific types of activities for staff development.

  Example: Inservice training sessions and courses/workshops designed by TTU in response to specific needs/problems identified by the GISD. The theme of the inservice training on 24-25 Aug 87 was "Helping Students to Become Better Learners," and some of the inservice training sessions throughout the 1987-88 year will include: student/teacher learning styles, teaching styles, working with able learners, teaching the fine arts, child/adolescent development, parent involvement, and screening for dyslexia. In addition to the course pertaining to the teaching of thinking skills as previously described, another course, "Restructuring the Math Curriculum," will also be offered as an off-campus resident course during the 1987 fall semester. Two additional TTU courses will be offered on the GISD campus during the 1988 fall and 1989 spring semesters.

- Develop capacity/ability of the school district to obtain additional resources by developing proposals for external funding (including more effective use of funds available from Chapter 2, ECIA).

  Example: Provide training to selected administrators/staff in grantsmanship. This was started during the 1987 spring semester when arrangements were made for the Curriculum Director of the GISD to enroll at TTU in a Grantsmanship Workshop. Currently, several grant proposals are in the process of being submitted including one, in collaboration with TTU, under the Education for Economic Security Act, Title II (Program for Mathematics, Science and Critical Foreign Languages).

- Conduct an effective needs assessment.

  Example: Collect base-line data on student achievement tests, school climate factors (program, process, and material determinants), teaching effectiveness (learning/teaching styles and brain hemisphericity) so as to better decide what intervention would be most appropriate.

- Experiment with the use of educational technology.

  Example: Experiment with telecommunication, such as "Distant Learning," as a delivery system for inservice and off-campus courses as well as presenting certain secondary level courses for students.

- Develop indicators of educational quality appropriate for the local school district.

  Example: Classify student test data into disaggregated categories (SES) to better monitor academic progress and to determine if instructional programs are effective for all students.

- Experiment with curriculum and organizational changes.

  Example: Restructure/update the math area of the curriculum.

- Identify and develop research laboratories (classroom) for school improvement efforts.

  Example: Determine the effectiveness of certain programs/teaching strategies. Also, organize teams for action research.

- Create clinical school settings where prospective teachers can learn the best in research and practice in teaching in rural/small schools.

  Example: The assignment by TTU of certain student teachers to an effective rural/small school and provide training to teachers who will be supervising student teachers. Hopefully, GISD will be identified as one of the TTU Professional Laboratory Schools and will serve as a Demonstration School for visitors from other rural/small schools who are interested in school improvement practices.

- Assist teachers/administrators to acquire skills and knowledge to feel enpowered to act on problems that are relevant to their school and to their professional development.

  Example: Providing appropriate staff and professional development activities including assisting teachers to start working on advanced degrees. (All of the off-campus courses to be offered by TTU on the GISD campus can be counted towards the masters degree.)

Some Politics and Successes in Developing the Model

Politics Involved in Change

As we attempt to solve problems in our schools, we seldom think of forming a partnership outside our own environment. The idea that a variety of institutions and people from various backgrounds could coalesce for change is innovative and dramatic. This new partnership approach will provide human and financial support which will bring about a better and more equitable education for all children. The network approach allows all the partners to participate and provide in ways they would not otherwise be capable of doing on their own.

It can be expected that each partner will face institutional politics which will need addressing if the support system is to operate smoothly. As these diverse groups join together, their reasons for participating, their various perspectives and their unique contributions need individual consideration and recognition.

The extent to which each group can give and receive support will depend upon how serious the school trustees, the superintendent and the principals are about the project. They must realize that the idea of sponsorship and collaboration is a powerful vehicle for school improvement.

Recent reports on public education state that many initiatives are being taken with little or no attention by the local school board. Despite all the interest in "partnerships" between the business and education sectors, serious roadblocks to raising student achievement, improving staffs and elevating standards can occur if school boards lack information and are not involved. (IEL, 1986) The board leader needs to be a facilitator for building consensus.

Reforms and changes cannot occur without local involvement and "ownership". Business, civic and community interest must be

sustained through interaction and direct involvement in the partnership. Research indicates that the community wants its board members to encourage parent involvement in the school. Parent involvement enables children to achieve better and learn more. The ancient Chinese proverb, "One parent is worth a thousand teachers," illustrates what research confirms. (Lieberman and Miller, 1984) Parents participation in the education of their children provides a bottom-up foundation of support and commitment.

The politics of change involve awareness and acceptance. Each partner has political nuances which require information dissemination. Many institutions, including the coordinating board, other universities with overlapping territories, other local school systems, junior colleges, the Education Service Center, educational laboratories, local chambers of commerce and various community agencies, will want to make their operating policies known. Each time a change takes place between these institutions, an information session of some type will be needed. Communication for awareness and acceptance can take many forms including visitations, dialogues, meetings, workshops, letters, news articles, orientations, and in-service sessions. This process can be recycled and modified throughout the awareness and acceptance stage.

Successes

If we are to be successful in our attempts at school improvement, there must be active participation, continued support and adequate resources and rewards. The achieved outcomes of this partnership are not yet known. The combination of inputs from the partners can provide research data which can support and enhance new legislative trends which will assist rural/small schools in their school improvement plans. Because schools are complex organizations, research on how improvement takes place through the collaborative effort will provide new strategies for rural/small schools.

To suggest that this effort will be successful in all respects would be presumptuous at this time. However, where there is the possibility for involvement and participation, growth is possible. In contrast, where ideas cannot be translated into practical realities, there are lectures better left undelivered. So for now, the jury will be out for some time.

School improvement takes time and hard work and may not be cost-effective. Ideally, careful planning which results in early

success will legitimatize the project and will later make it a standard operating procedure. When a school has strong leadership, a committed staff and support from the community, it is ready to make improvements.

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APPENDIXES

A - Framework for Developing the TTU/GISD Partnership Model

B - Framework for Improving the Teaching of Thinking Skills

C - Letter of Invitation from SEDL to participate in the rural/small school initiative

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EDSE 5001-004
EDEL 5002-002

A FRAMEWORK FOR IMPROVING THE TEACHING OF THINKING SKILLS

Course Description

Schools are beginning to use programs and materials especially designed to teach various aspects of thinking - the thinking skills movement, but full development of student thinking abilities depend on methods used regularly by teachers at all levels. This course is designed for administrators/teachers who are intereted in becoming more aware of the thinking skills movement and in developing and nurturing the growth of intelligent behavior in their students. The course will focus on: the biological basis of thinking (left/right brain research findings); the need to teach students to think; creating school conditions for skillful thinking; teaching for thinking; teaching of and about thinking; and some mental tactics for improving the teaching of thinking skills.

Objectives

Students will be able to:

1. Describe some recent research findings concerning the biological basis of thinking (left/right brain research findings).
2. Describe the thinking skills movement including a rationale for the need to improve the teaching of skillful thinking.
3. Identify some qualities of skillful thinkers and conditions that develop them.
4. Identify and describe various approaches to teaching of, for, and about thinking.
5. Define some generic terminology relating to the teaching of skillful thinking including: basic thinking processes, problem solving, decision making, critical thinking, and creative thinking.
6. Judge and incorporate various strategies for teaching thinking skills throughout the curriculum.
7. Prepare a "next steps" action plan for improving student thinking.

Topic Outline

I. Introduction

A. Class Members

B. Overview of Course

II. Some Biological Bases for Thinking (pp. 62-68, 71-80*)

A. Mysteries of the Brain (Videotape)

B. Biological Structure and Thinking

C. The Split-Brain Theory

D. Brain Hemispheric Dominance

E. Educational implications of recent brain research

III. Issues in Teaching Thinking (Teaching Skillful Thinking, Videotape #1)

A. Some Issues Related to Teaching Thinking in the Schools

B. Why Teach Thinking: A Statement of Rationale (pp. 1-6*)

IV. The Skillful Thinker (Teaching Skillful Thinking, Videotape #2)

A. Some Common Types of Thinking

B. Good Thinking vs. Poor Thinking

C. The Good Thinker (pp. 49-53*)

V. Teaching <u>For</u> Thinking (Teaching Skillful Thinking, Videotape #3)

A. Teacher Behaviors That Enable Student Thinking (pp. 125-138*)

B. Teaching Regular Academic Content So Students Are Expected To Think

C. Creating Classroom Conditions In Which Students Can Think

D. Thinking Through Productive Interaction

1. Teacher-student interaction (recitation and discussion)
2. Student-student interaction (cooperative learning)

E. Thoughtful Discussion Requires Good Questioning Techniques

VI. Teaching Of And About Thinking (Teaching Skillful Thinking, Videotape #4)

A. Teaching For, Of, and About Thinking (pp. 20-23*)

B. Teaching <u>Of</u> Thinking

1. Teaching students cognitive skills
2. Mediation-patient, encouraging interaction
3. Process for introducing thinking skills
   a. Define the skill
   b. Explain the skill
   c. Model or demonstrate the skill

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*Costa, <u>Developing Minds</u>

C. Teaching About Thinking

1. Helping students be aware of their thinking processes; developing more conscious control over their thinking (metacognition)
2. Metacognitive strategies
   a. Predicting
   b. Questioning
   c. Summarizing
   d. Clarifying

VII. Thinking Skills: Meanings and Models (pp. 41-48, 145-150*)

A. Essential Thinking Skills

1. Bloom's taxonomy
2. Guilford's structure of intellect

B. Basic Thinking Processes

1. Causation
2. Transformation
3. Relationships
4. Classifications
5. Qualifications

C. Complex Thinking Processes

1. Problem solving
2. Decision making
3. Critical thinking
4. Creative thinking

VIII. Some Mental Tactics For Teaching Thinking Skills (Tactics for Thinking, Videotape 1-22)

A. Learning-To-Learn Skills

1. Attention control--a tactic for monitoring and consciously controlling your level of attention.
2. Deep processing--a tactic for generating mental pictures, sensations, emotions, and linguistic information about the subject of a thought.
3. Memory framework--a tactic consisting of an easy-to-remember set of cues with which information is associated so that it can be efficiently retrieved.
4. Power thinking--a tactic for consciously controlling one's attitudes to optimize a learning situation.
5. Goal setting--a tactic for specifying the direction you want to set for yourself and monitoring progress in that direction.

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*Costa. Developing Minds

6. The responsibility frame--a tactic that provides students with the necessary awarenesses and strategies to increase their performance on any task by taking responsibility for the essential elements of the task.

B. Content Thinking Skills

7. Concept attainment--a tactic of associating experiences with a word commonly used to represent those experiences.
8. Concept development--a tactic of identifying (1) the category and example of (2) similar and dissimilar concepts for (3) the attributes and (4) definition of a concept already attained.
9. Pattern recognition--a tactic for identifying organizational patterns in information you read or hear.
10. Macro-pattern recognition--a tactic for identifying organizational patterns for large blocks of information.
11. Synthesizing--a tactic for restating a large amount of information in fewer words.
12. Proceduralizing--a tactic for breaking a complex process into its component parts and then systematically learning that process until it becomes automatic.

C. Reasoning-Skills

13. Analogical reasoning--a tactic for identifying how one set of concepts has relationships similar to those found in another set of concepts.
14. Extrapolation--a tactic for determining how a generalized pattern from one piece of information can fit information from a different context.
15. Evaluation of evidence--a tactic for determining whether an unusual claim is substantiated or unsubstantiated.
16. Examination of value--a tactic for determining the value weight associated with information, analyzing the assumptions underlying that value, and identifying another set of assumptions that would yield a different value weight.
17. Decision making--a tactic for systematically selecting among alternatives.
18. Non-linguistic patterns--a tactic for identifying numeric, spatial, and recursive patterns.
19. Elaboration--a tactic for inferring information that is not stated.
20. Solving everyday problems--a tactic for systematically attacking problems faced in everyday life.
21. Solving academic problems--a tactic for solving different types of school-related problems.
22. Invention--a tactic for creating a new procedure.

IX. Summary and Evaluation

A. Course Summary

B. Final Comprehensive Examination

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Articles/Books

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Teaching Skillful Thinking. (1985). Arlington, VA: Association for Supervision and Curriculum Development.

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*Required textbooks

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SEDL
SOUTHWEST EDUCATIONAL DEVELOPMENT LABORATORY
211 East Seventh Street Austin, Texas 78701 512/476-6861

July 22, 1987

Mr. Samuel C. Martin II
Superintendent
Greenwood ISD
Rt. 1, Box 143 D
Midland, TX 79701

Dear Mr. Martin:

The Southwest Educational Development Laboratory (SEDL) invites the Greenwood district to participate in a rural, small school initiative effort that will focus on staff development to improve the teaching of thinking skills. Using proven methods, this effort will enlist the cooperation of the State Department of Education, intermediaries (ESC's, Coops, etc.), and institutions of higher learning to provide training and technical assistance to participating schools.

SEDL will develop and provide training for the trainers who will be working with your school(s), drawing from and using the experience, expertise, and research of experts in the area of thinking skills. The expense of the trainers, the materials that they will use, and the materials that your school(s) will need for the training will be paid for by SEDL. Other services related to the project will be:

- access to SEDL project staff for liason and information about related resources
- quarterly publications about the effort and related issues.

Your school district was recommended to SEDL for participation in the project in collaboration with the State Department of Education, intermediaries, and/or others. If your district is committed to thinking skills process/program implementation, then we believe that this effort can be of significant benefit. In order to accept this invitation your school district will need to meet several criteria:

- make a commitment to participate for the upcoming school year (1987-88)
- provide release time for teachers once a month from October 1, 1987 through March 31, 1988 for 2 to 4 hours of inservice
- allow access to teachers during school hours on campus periodically for technical assistance and data review (as per a mutually arranged schedule)
- provide support to teachers and trainers with services and facilities necessary for inservice training/follow-up
- provide access to sources of data on project activities and school practices

The Rural Small Schools Initiative staff at SEDL, under the general direction of Drs. Martha L. Smith and David L. Williams, Jr., will be coordinated on a day-to-day basis by Mrs. Gayla H. Lawson. They, and all of the other SEDL staff who will work on this project, are very enthusiastic about the opportunity to work with you and your district during the coming year.

Your letter of acceptance is eagerly awaited. There will be only ten school districts accepted in Texas, so we urge you to respond immediately if you wish to participate. We look forward to a long and mutually productive relationship with the Greenwood Schools.

If you should have questions or concerns about the project, please feel free to call Mrs. Lawson at (512) 476-6861.

Sincerely,

Preston C. Kronkosky

Preston C. Kronkosky
Executive Director

PCK/jdm

cc: Mr. Lynn Moak (TEA)
Executive Director Regional ESC
Dr. Martha L. Smith
Dr. David L. Williams, Jr.
Mrs. Gayla H. Lawson